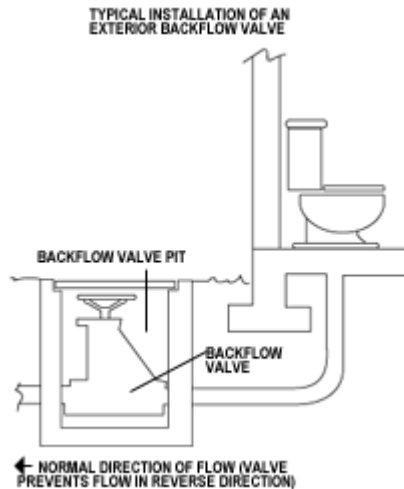




FEMA

WHILE YOU WERE OUT, THE WATER GOT IN...



Are You at Risk?

Your local floodplain manager, building official, city engineer, or planning and zoning administrator can typically tell you whether you are in a flood or other hazard area. Your local community official is also a good source of information on how to protect yourself, your house and property from flooding and other hazards.

What You Can Do

Basement flood protection can involve a variety of changes to your house and property—changes that can vary in complexity and cost. You may be able to make some types of changes yourself. Complicated or large scale changes or those that affect the structure of your house or its electrical wiring and plumbing should be carried out only by a professional contractor licensed to work in your state, county, or city. Below are some examples of flood protection:

- **Install Sewer Backflow Valves**

In some flood prone areas, flooding can cause sewage from sanitary sewer lines to back up into houses through drainpipes. Sewage backup not only causes damage, but also creates health hazards. Backflow valves have a variety of designs ranging from simple to complex. This is something that only a licensed plumber or contractor should do.

- **Raise or Flood Proof Heating, Ventilating, and Air Conditioning Equipment**

In flood prone houses, a good way to protect HVAC equipment is to elevate it above the areas that flood. Another method is to leave the equipment where it is and build a concrete or masonry block floodwall around it.

- **Anchor Fuel Tanks**

Unanchored fuel tanks can be easily moved by floodwaters. One way to anchor a tank is to attach it to a large concrete slab whose weight is great enough to resist the force of floodwaters. Elevate tanks to a minimum of at least one foot above the base flood elevation (BFE). Floating and/or damaged tanks pose serious threats not only to you, your family, and your house, but also to public safety and the environment.

- **Raise Electrical System Components**

Any electrical system component, including service panels (fuse and circuit boxes), meters, switches, and outlets, are easily damaged by floodwaters. All components of the electrical system, including the wiring, should be raised at least one foot above the base flood elevation (BFE).

- **Raise Washers and Driers**

Washers and driers can easily be damaged in a flood. In order to prevent this from happening, utilities can be placed on cinder blocks one foot above the base flood elevation (BFE).

Protecting Your Property From Flooding

Tips

Keep these points in mind when applying mitigation methods:

- Plumbing projects should be done by a licensed plumber or contractor, who will ensure that the work is done correctly and according to all applicable codes.
- Heating, air conditioning and ventilating work in your house should be done by a licensed contractor, who will ensure that the work is done correctly and according to all applicable codes.
- Fuel Tank anchoring can be done by a homeowner or contractor. Close all connections when flood warnings are issued.
- Electrical system modifications should be done by a licensed contractor, who will ensure that the work is done correctly and according to all applicable codes.
- Make sure to obtain all necessary local and state permits prior to starting any work on your home.

Other sources of Information

Protecting Your Home from Flooding, FEMA, 1994

Repairing Your Flooded Home, FEMA- 234, 1992

Flood Emergency and Residential Repair Handbook, FIA-13, 1986

Retrofitting Flood-Prone Residential Structures, FEMA-114, 1986

Protecting Building Utilities from Flood Damage, FEMA-348, 1999

To obtain copies of these and other FEMA documents, call FEMA Publications at **1-800-480-2520**. Information is also available on the World Wide Web at <http://www.fema.gov>.

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